

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on page 4, line 34 as follows:

The general purpose of the present invention is therefore to provide a corrosion inhibiting apparatus and method which are easy to practice, and which will effectively reduce the tendency of corrosion to accumulate upon the inaccessible surfaces and passageways of an internal combustion engine cooling system. The method has been design to be relatively simple and short, while obviating the difficulties encountered in the practice of prior art processes. To attain this, the present invention contemplates an apparatus for the introduction of an inert gas into the interior cooling system or water jacket of an internal combustion engine, typically somewhere near the highest point of the cooling system. The process is continued by allowing the inert gas to circulate throughout the entire cooling system until all corrosion inducing fluids, such as oxygen and water vapor are expelled through the engine's cooling system intake and exhaust output ports. Finally the inert gas is retained in the system for the length of time it is desired to preserve the cooling system. In addition, an anticorrosive material may be mixed with the inert gas prior to introduction to increase the efficacy of the system. By using an inert gas that is lighter than air, oxygen and water vapor, all of the key elements critical to corrosion are displaced from the system due to the ~~buoyancy~~ density of the purging fluid (i.e. inert gas).

Please amend the paragraph beginning on page 6, line 9, as follows:

As used in the present application, an~~The inert gas should be understood to include can comprise any~~ a gaseous fluid that is non-reactive with fluids within the engines cooling system or an inert gaseous fluid other than oxygen and hydrogen and ideally is a gaseous fluid that has ~~an atomic weight~~ a density less than that of oxygen and water vapor. The preferred inert gas is helium. The amount of helium required to purge the cooling system of oxygen and water vapor is significantly less than other inert gases due to helium's low ~~atomic weight~~ density and hence its natural buoyancy in comparison to air. Helium also prevents the possibility of air leakage back into a watertight system. Another suitable inert non-reactive gas is nitrogen, which would be considered an inert gas according to the present invention. However the use of nitrogen would require a greater

quantity to be introduced into the cooling system due to the fact that nitrogen has ~~an atomic weight~~ a density only slightly less than that of air. In addition, the inert gas may also include those gases or gaseous compounds that are ~~completely~~ chemically non-reactive with the compounds within the cooling system, such as argon or Freon. Because these inert gases ~~are have~~ a density ~~an atomic weight~~ greater than that of air, these gases must be introduced from the bottom of the engine cooling system or combustion chamber. It is to be specifically noted that this reverse purging method falls within the scope of the present invention.

Please amend the paragraph beginning on page 8, line 31, as follows:

Referring now to Figure 1, reference numeral 10 is used to indicate the apparatus of the present invention. The first component includes a cylindrically shaped tank 11 containing a supply of inert gas, or a gas that is non-reactive with the fluids within tank 11. Preferred inert or non-reactive gases for the purpose of the present invention include helium and nitrogen. The inert gas is retained within tank 11 under high pressure, and when it is desired to use the apparatus, valve 12 is opened to introduce a supply of gas into the system herein after described. A conventional pressure regulator 13, having the usual pressure gauge 14, is provided in the system 10 adjacent tank 11, and is adapted to control and limit the pressure of the inert gas to a maximum level, such as, for example, 100 pounds per square inch (psi). In order to work effectively, the inert gas flow must be regulated to gradually displace all corrosion inducing fluids in the cooling system without creating an undue pressure buildup in the cooling system. A relief valve 15, which is actuatable at a set predetermined pressure such as 120 psi, is provided in the system 10 adjacent regulator 13 to act as a safety device. A flexible hose 16 extends from relief valve 15 to a pressure gas jet eductor 17 connected to an anticorrosive material tank 18, which is adapted to be mixed in its venturi (not shown) with the supply of inert gas from the tank 11. When the valve 19 of tank 18 is opened, the high velocity inert gas atomizes the liquid withdrawn from the anticorrosive material tank 18 into the venturi and creates an anticorrosive protective film coating or "fog" for coating the internal surfaces of the cooling system. A pressure gauge 20 is connected in the system adjacent tank 18, and is suitably provided with a pressure relief valve 21. A shut-off valve 22 is provided in the system 10 adjacent gauge 20, and is connected by a flexible hose 23 to a high pressure quick connect

coupling or fitting 24 utilized to convey the inert gas and anticorrosive material through a mating cooling system coupling 25 attached to the cooling system 26 of an engine 33 to be preserved (see Figure 4).

Please amend the paragraph beginning on page 11, line 22, as follows:

The preferred inert or non-reactive gases include helium and nitrogen. Alternate inert gases or gaseous compounds include argon and Freon. The preferred inert gas should have a density ~~an atomic-weight~~ that is less than the density ~~atomic-weight~~ of corrosion inducing materials that are sought to be purged from the cooling system such as oxygen and/or water vapor and should be introduced into an upper portion of the engine. When the inert gas is introduced into the cooling system 26 of an internal combustion engine, the gas will quickly become dispersed throughout the entire cooling system 26 of the engine and will displace air (including oxygen) and water vapor residing within the cooling system 26. While the inert gas will initially rise to the top or uppermost portion 36 of the cooling system 26, as the volume of gas increases and accumulates within the system the inert gas will force the oxygen and water vapor out of the system through the cooling system openings including the water intake 34 and exhaust outlet 35. By removing the oxygen and water vapor from the system 26, the potential for the formation of corrosion within the cooling system is also eliminated.

Please amend the paragraph beginning on page 12, line 8, as follows:

Alternatively, an inert gas that has a density ~~an atomic-number~~ greater than ~~that~~ that of air can also be utilized. However, it is preferable that these inert gases be introduced into a lower portion of the engine cooling system.